

**IN THE SPECIFICATION:**

On page 1, line 1, change the heading **TITLE OF THE INVENTION** to delete the bold and underline as follows:

## TITLE OF THE INVENTION

On page 1, line 4, change the heading **CROSS-REFERENCE TO RELATED APPLICATIONS** to delete the bold and underline as follows:

## CROSS-REFERENCE TO RELATED APPLICATIONS

On page 1, line 8, change the heading **FIELD OF THE INVENTION** to delete the bold and underline as follows:

## FIELD OF THE INVENTION

On page 1, line 11, change the heading **BACKGROUND OF THE INVENTION** to delete the bold and underline and center as follows:

## BACKGROUND OF THE INVENTION

Please replace the third paragraph on page 1, under "Background of the Invention," with the following:

The lymphoselective toxicity of 2-chloro-2'-deoxyadenosine (CldAdo, cladribine) and its potential as a chemotherapeutic agent against lymphoid neoplasms were reported by Carson et al.<sup>1</sup> This potent, ~~deaminase-resistant~~ deaminase-resistant analogue of 2'-deoxyadenosine (dAdo) is currently the drug of choice for hairy-cell leukemia.<sup>2,3</sup> It also has significant activity against chronic lymphocytic leukemia,<sup>4,5</sup> indolent non-Hodgkin's lymphoma,<sup>6</sup> and Waldenström's macroglobulinemia.<sup>7</sup> Investigations with cladribine treatment of multiple sclerosis,<sup>8</sup> systemic lupus erythematosus-associated glomerulonephritis,<sup>9</sup> and other rheumatoid and immune disorders are in progress. Cladribine is a nucleoside prodrug, which is phosphorylated by deoxycytidine kinase to CldAMP, and then sequentially to CldADP and the active CldATP.<sup>1a,10a</sup> Cladribine also is a good substrate for mitochondrial 2'-deoxyguanosine

(dGuo) kinase,<sup>10</sup> and induction of programmed cell death by direct effects on mitochondria has been implicated in its potent activity against indolent lymphoid malignancies (via apoptosis) as well as in proliferating cells.<sup>11,12</sup>

Please replace the first full paragraph on page 3, with the following:

Sampath et al. have recently shown (U.S. Patent No. 6,596,858 B2) a method for making 2-chloro-2'-deoxyadenosine compounds, using 2-amino-2'-deoxyadenosine as a starting compound, but beginning with an initial diazotization/chloro-dediazoniation reaction on the unprotected nucleoside to replace the 2-amino group with a 6-chloro 2-chloro group. This method, however, creates various impurities, which requires extensive purification procedures, and results in an overall yield of only 27%.

On page 3, line 13, change the heading SUMMARY OF THE INVENTION to delete the bold and underline and add BRIEF at the beginning of the line as follows:

#### BRIEF SUMMARY OF THE INVENTION

On page 3, line 21, replace the heading DESCRIPTION OF THE FIGURES with the following heading:

#### BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWINGS

On page 4, line 1, replace the heading DESCRIPTION OF PREFERRED EMBODIMENTS OF THE INVENTION with the following heading:

#### DETAILED DESCRIPTION OF THE INVENTION

Please replace the third paragraph on page 8, with the following:

Compound **7** underwent efficient diazotization/bromo-dediazoniation with TMS-Br and tert-butyl nitrite (TBN). Competing redox interactions between nitrite anion and TMS-Br precluded the use of NaNO<sub>2</sub>. The 2-bromo-6-chloropurine nucleoside nucleoside 3<sup>27,37</sup> (85%, without chromatography) was obtained as a crystalline solid with TMS-Br (9 equivalents)/TBN (20 equivalents)/CH<sub>2</sub>Br<sub>2</sub>/ambient temperature within 1 h.